UDALOV, A.S. (Penza)

Theory of curves and surfaces in affine and projective spaces.
Izv. vys. ucheb. zav.; mat no.4:158-164 '63. (MIRA 16:10)

52

L 17836-63 EWT(d)/FCC(w)/BDS AFFTC/IJP(C)
ACCESSION NR: AP3004792 S/0039/63/061/004/0426/0442

AUTHOR: Udalov, A. S. (Saratov)

TITLE: The theory of curves in a projective space and its application to linear differential equations

SOURCE: Matematicheskiy sbornik, v. 61, no. 4, 1963, 426-442

TOPIC TAGS: curve theory, projective space, radial-fiber space, tangential-fiber space, double-fiber space, connecting object, projective invariant, natural reference frame, fundamental-density system, Frenet formula, linear differential equation

ABSTRACT: Fundamental parameters of a curve C in a projective space P_n are studied. On the basis of definitions of the concepts of radial-fiber space, tangential-fiber space, double-fiber space, projective invariants, weight density, order of the object on a curve, and fundamental connecting object of a curve, the construction of necessary objects associated with the curve C is carried out. First, the fundamental system of projective invariants is constructed to serve as a basis for further constructions. It is proved that the

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L 17836-63

ACCESSION NR: AP3004792

least possible order of projective invariants is n + 2. The construction of the set of vectors forming the natural frame of reference of a curve is based on constructing objects of affine connections γ and Γ in radial and fibered spaces, respectively. The concept of the class q of the curve C is introduced, and the minimal order of the frame of reference and of the fundamental system of projective invariants is shown to be a function of q. With the aid of γ and Γ, the construction of densities $v_2, v_3, \ldots v_{n+1}$ in a double-fiber space is accomplished. Relations are derived having the form of Frenet formulas, from which it follows that when $v_2, v_3, \ldots v_{n+1}, \gamma, \Gamma$ are given, the curve C in a projective space P_n is defined with an accuracy approaching the automorphism of the space P_n. The results presented are applied to the study of linear differential equations of any order with variable coefficients. A curve in a projective space P_n is uniquely associated with every linear differential equation. All objects, definitions, and properties invariantly connected with the curve C are transferred to differential equations. By using Frenet formulas, a linear differential equation with variable coefficients at $q < n - 1$ can be reduced to a linear differential equation with constant coefficients. Orig. art. has: 68 formulas.

Card 2/2

UDALOV, B.

Achievements of outstanding truck drivers in Sverdlovsk. Avt.transp. 33 no.8:38 Ag'55. (MLRA 8:12)

1. Predsedatel' Sverdlovskogo obkoma profsoyuza rabochikh avtotransporta i shosseynykh dorog.
(Sverdlovsk--Automobile drivers)

ZAV'YALOV, M.A., polkovnik; UDALOV, F.P., inzh.-mayor

Office of tape recording. Vest.protivovozd.obor. no.1:64-66 Ja '61.
(MIRA 14:2)

(Radio in aeronautics)

KOCHESHKOV, [illegible]; [illegible]ANTSEVA, N.A.; UDALOV, I., red.

[Agricultural practices in growing large crops; from the practices of Yur'ev-Pol'skiy State Variety Testing Station in Vladimir Province] Agrotekhnika vysokikh urozhaev; iz opyta IUr'ev-Pol'skogo gosudarstvennogo sortoispytatel'nogo uchastka Vladimirskoi oblasti. Vladimir, Verkhne-Volzhskoe knizhnoe izd-vo, 1965. 27 p. (MIRA 18:10)

UDALOV, I. P.

Dissertation: "Investigation of the Effect of Adjustments and the Wearing of Parts of a Tractor Magneto on Its Parameter." Cand Tech Sci, Moscow Inst of Mechanization and Electrification of Agriculture imeni V. M. Molotov, 28 May 54. Vechernyaya Moskva, Moscow, 19 May 54.

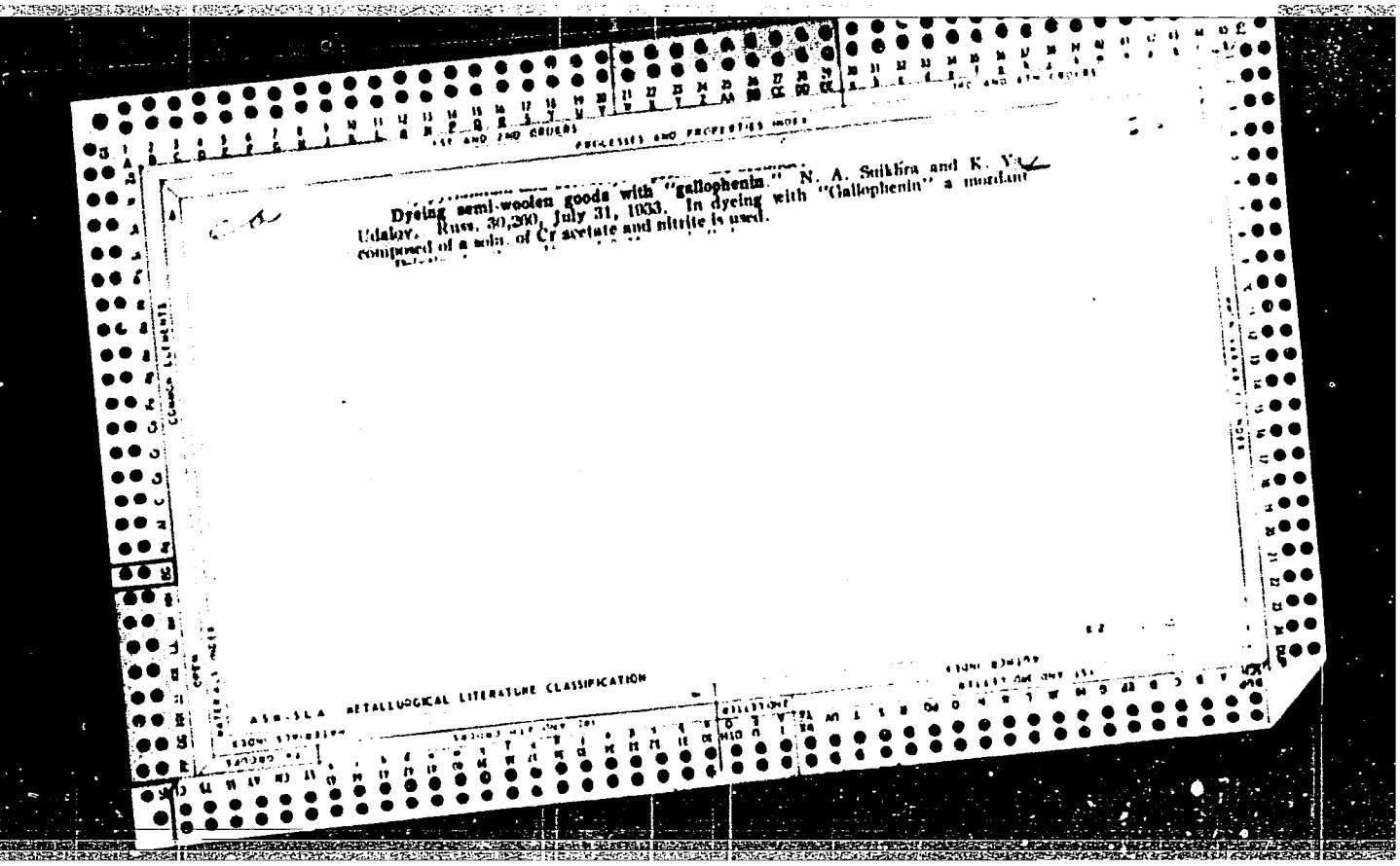
SO: SUM 284, 26 Nov 1954

UDALOV, Iosaf Petrovich; SMELOV, Aleksandr Petrovich[Smielov, O.P.]; CHERKUN, Vladimir Yefimovich; OLEFIRENKO, G.A.[Olifirenko,H.A.], red.; NEMCHENKO, I.Yu., tekhn. red.

[Repairing checking and measuring devices for tractors] Remont avtotraktornykh kontrol'no-vymiriuval'nykh pryladiv. Kyiv, Derzhsil'hospvydav URSR, 1961. 39 p. (MIRA 15:6)
(Tractors--Maintenance and repair)

MALOV, V.N.; URNIS, A.F.; UDALOV, K.N.

[Methodological instructions and examples on mathematics and physics] Metodicheskie ukazaniia i primery po matematike i fizike; v pomoshch' postupaiushchim v institut. Leningrad, M-vo putei soobshcheniia SSSR, 1959. 110 p. (MIRA 13:6)
(Mathematics--Problems, exercises, etc.)
(Physics--Problems, exercises, etc.)



Dyeing semi-woolen goods with "gallophenin." N. A. Sukhira and K. V. Udalov. Russ. 30,390, July 31, 1933. In dyeing with "Gallophenin" a mordant composed of a salt of Cr acetate and nitrite is used.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KOMLEV, G.A.; KLEANDROV, T.N.; CHAKHOTIN, V.S.; UDALOV, L.K.; MAKAROV, V.F.

Reducing losses of metal in the processing of mercury ores in rotary tube furnaces. Izv.AN Uz.SSR.Ser.tekh.nauk 8 no.4:66-69 '64. (MIRA 18:4)

1. Sredneaziatskiy filial Gosudarstvennogo nauchno-issledovatel'skogo instituta tsvetnykh metallov.

CHAKHOTIN, V.S.; UDALOV, L.K.; STEPANOV, B.A.

Use of natural gas at the Almalyk copper smelting plant. TSvet. met. 35 no.11:49-51 N '62. (MIRA 15:11)
(Almalyk--Copper--Metallurgy)

UDALOV, M.K.

Machine for unloading bulk cargoes from open freight cars. Sakh. prom. 28 no.5:17-20 '54. (MLRA 7:9)

1. Taldy-Kurganskiy sakharnyy zavod.
(Loading and unloading)

KORABLEV, Petr Aleksandrovich; UDALOV, M.S., inzh., retsenzent; YELISEYEV, M.S., inzh., red.; CHERNOVA, Z.I., tekhn.red.

[Machining with machine-tools in the manufacture of instruments] Obrabotka na agregatnykh stankakh v priborostroenii. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 164 p. (MIRA 13:12)

(Instrument manufacture) (Metal cutting)

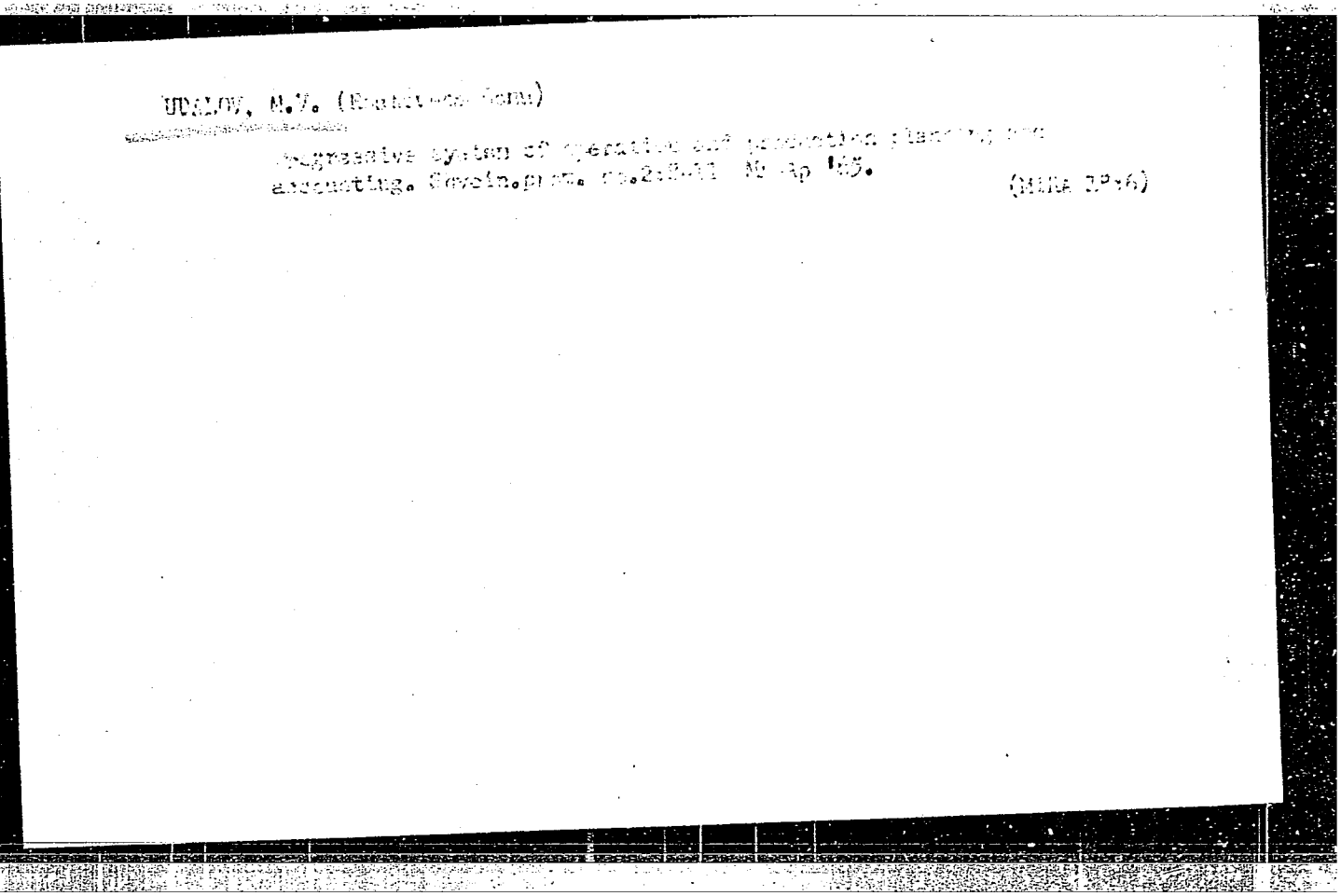
KORABLEV, P.A.; UDALOV, M.S., inzh., retsenzent; IVANOVA, N.A., red. izd-va; TIKHANOV, A.Ya., tekhn. red.

[Precision of machining with machine tools in the instrument industry] Tochnost' obrabotki na metallorezhushchikh stankakh v priborostroenii. Moskva, Mashgiz, 1962. 224 p. (MIRA 15:8)

(Instrument industry) (Metal cutting)

UDALOV, M.V. (Moskva)

Improve the training of clothing industry specialists. Shvein. prom. no.1:36-38 Ja-F '62. (MIRA 15:4)
(Clothing industry) (Technical education)



UDALOV, M.V. (Rostov-na-Donu)

Progressive system of operative and [illegible] planning and accounting. Sovet.profsoiuzy no.2:8-11 F '45. (MLRA 7:6)

UDALOV, M.V. (Rostov-Na-Donu)

Specialization and cooperation of the clothing industry in the Northern Caucasus. Shvein. prom. no.4:24-26 Jl-Ag '65. (MIRA 18:9)

UDALOV, N.; KAMINSKIY, N.

Hourly bonus payments for repair work. Sots.trud. no.5:71-74 My '56. (MLRA 9:8)

(Electric power plants) (Wages)

KOMOLKIN, V., shofer 1-go klassa, obshchestvennyy avtoinspektor, udarnik kommunisticheskogo truda; IVANOV, S., obshchestvennyy avtoinspektor; UDALOV, N., shofer-lyubitel'

Readers suggest and seek advice. Za bezop.dvizh. 5 no.7:16 Jl '62. (MIRA 15:8)

1. 15-ye otdeleniye Otdela regulirovaniya ulichnogo dvizheniya Gosudarstvennoy avtomobil'noy inspektsii (for Ivanov).
(Traffic safety)

UDALOV, N.I.

The BK-110 high-speed finishing calendar. Biul.tekh.-ekon. inform. no.3:46-48 '61. (MIRA 14:3)
(Textile machinery)

SMIRNOV, B.I.; UDALOV, N.I.

The SP-110 machine for drying textile fabrics after printing.
Biul.tekh.-ekon.inform. no.7:66-68 '61. (MIRA 14:8)
(Drying apparatus--Textile fabrics)

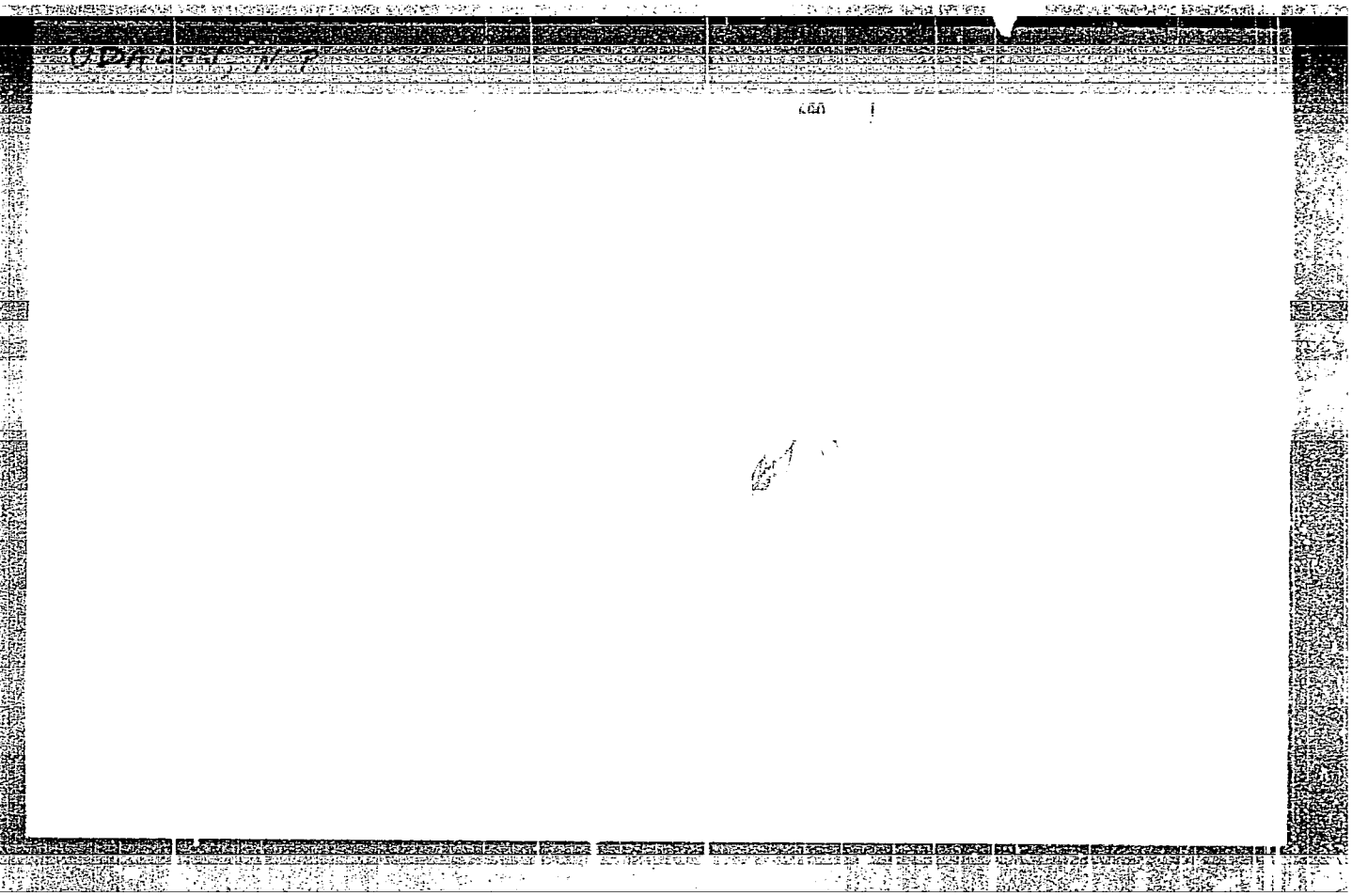
UDALOV, N.I.

The MShTS-110 small tenter chain machine. Biul.tekh.-ekon.inform. no.8:59-61 '61. (MIRA 14:8)
(Textile machinery)

SHUMKOV, B.P.; UDALOV, N.K.

Needs of the Zherdevka Technical School. Sakh.prom. 34 no.10:14-15 O '60. (MIRA 13:10)

1. Zherdevskiy tekhnikum sakharnoy promyshlennosti.
(Zherdevka--Sugar industry--Study and teaching)



UDALOV, N.P. (Moskva)

Calculation of a two-terminal network containing one thermistor in linear operation. Avtom. i telem. 26 no.10:1882-1883 O '65. (MIRA 18:10)

UDALOV, Nikolay Petrovich

AGEYKIN, Dmitriy Ivanovich; KOLOSOV, Sergey Petrovich; UDALOV, Nikolay Petrovich; USHOMIRSKAYA, M.M., inzhener, redaktor; SUVOROVA, I.A., redaktor; LEBEDEVA, L.A., tekhnicheskiy redaktor

[Manual for designing elements in automatic control; a textbook for courses in designing] Rukovodstvo po proektirovaniiu elementov avtomatiki; posobie po kursovomu proektirovaniiu. Moskva, Gos. izd-vo obor. promyshl. Pt.1. 1957. 135 p. (MLRA 10:5)

(Automatic control)

UDALOV, N.P., kandidat tekhnicheskikh nauk.

Use semiconductor thermistors widely. Izobr. v SSSR 2 no.4:9-14 Ap '57.
(Thermistors) (Semiconductors) (MLRA 10:6)

UDALOV, N.P

ф.3 PHASE I BOOK EXPLOITATION 1207

Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy promyshlennosti. Moskovskoye pravleniye

Primeneniye poluprovodnikov v priborostroyenii; trudy konferentsii (Use of Semiconductors in Instrument Making; Transactions of a Conference) Moscow, Mashgiz, 1958. 258 p. 20,000 copies printed.

Ed. (Title page): Chistyakov, N.I., Doctor of Technical Sciences, Professor; Ed. (Inside book): Monastyrskaya, A.M., Engineer; Tech. Ed.: Uvarova, A.F.; Managing Ed. for Literature on Machine Building and Instrument Construction (Mashgiz): Pokrovskiy, N.V., Engineer.

PURPOSE: This book is intended for scientists, engineers and technicians working in the field of instrument making and for teachers and students of technical vuzes.

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Use of Semiconductors in Instrument Making (Cont.) 1207

COVERAGE: The articles in this collection describe semiconductor components of modern instruments, the physical basis of their applications, the principles of designing instruments equipped with semiconductors, and practical experience derived from the application of these instruments in various fields. No personalities are mentioned. There are 111 references, of which 54 are Soviet, 29 English, 17 German, 8 French, 1 Polish, 1 Czech, and 1 Japanese. References appear at the end of each article.

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AVAILABLE: Library of Congress

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JP/ksv
2-17-59

SOV/143-58-3-4/18

AUTHOR: Udalov, N.P., Candidate of Technical Sciences, Docent

TITLE: A Simplified Method of Computing the Family of Volt-Ampere Characteristics for a Semi-Conducting Thermo-Resistance (Uproshchennyy metod rascheta semeystva voltampernykh kharakteristik poluprovodnikovogo termosoprotivleniya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1958, Nr 3, pp 32-34 (USSR)

ABSTRACT: The author states that both he and D.V.Dorofeyev suggested methods for recording the family of the volt-ampere characteristics of thermistors. However, this problem is not finally resolved yet. The methods have the following basic requirements: 1) A number of points are chosen on the original volt-ampere characteristic curve. Straight lines are drawn through these points to the coordinate source. 2) For each point obtained $R_K = U_K/I_K$ is computed, and the corresponding temperature Θ_K is determined. The leakage coefficient $b_K =$

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A Simplified Method of Computing the Family of Volt-Ampere Characteristics for a Semi-Conducting Thermo-Resistance

$U_K I_K / \Theta_K - \Theta_0$ is also worked out. Where b_K = breakage coefficient, U_K = voltage drop in thermistor, L_K = current flowing in the working body of thermistor, Θ_K - temperature of working body, Θ_0 - temperature of surrounding medium. 3) With the help of the formula [3], the value of l_k for given temperatures of the surrounding medium is ascertained. 4) By setting off the I^1_K values along the axis of the abscissa of the volt-ampere characteristic and projecting straight lines through these points parallel to the ordinate axis to cut the straight line 0_K, points k^1 of the new volt-ampere characteristic are determined. There are 2 graphs and 3 Soviet references.

ASSOCIATION: Moskovskiy aviatsionnyy institut imeni Sergo Ordzhonikidze (Moscow Aviation Institute imeni Sergo Ordzhonikidze)

AUTHOR: Udalov, N. P. (Moscow) SOV/103-19-11-9/10

TITLE: Stabilization of Temperature of Heating Substance of a Thermal Resistance (Stabilizatsiya temperatury rabochego tela podogrevnogo termosoprotivleniya)

PERIODICAL: Avtomatika i telemekhanika, 1958, Vol 19, Nr 11, pp 1070-1072 (USSR)

ABSTRACT: The paper gives a scheme for the stabilization of the heating substance temperature of a heating resistance device in the case of varying environment temperature. The scheme is constructed with the aid of semiconducting thermal rheostats with indirect heating. It assures the stabilization of the temperature of the heating substance through changes of heating current as a function of environment temperature. The method for calculating such a scheme is given. It is proved that through the application of such a scheme the properties of time switches, generators, and other installations with semiconducting thermal rheostats may be considerably improved. The graphical method for calculating the scheme, which is given here, assures a precision which is sufficient for practical purposes. There are 5 figures and 1 Soviet reference.

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9(4) PHASE I BOOK EXPLOITATION SOV/2026

Udalov, Nikolay Petrovich

Poluprovodnikovyye termoupravlyayemyye soprotivleniya (Thermistors) Moscow, Oborongiz, 1959. 89 p. (Series: Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze. Trudy, vyp. 104) 11,650 copies printed.

Ed.: S. P. Kolosov, Candidate of Technical Sciences; Ed. of Publishing House: P. B. Morozova; Tech. Ed.: V. P. Rozhin; Managing Ed.: A. S. Zaymovskaya, Engineer.

Sponsoring Agency: Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze.

PURPOSE: This book is intended for engineers and designers concerned with automation and measuring techniques. It should also prove useful to advanced students working on diploma theses in these fields.

COVERAGE: The author supplies basic information on characteristics of thermistors with direct and indirect heating and explains methods for calculating circuits with thermistors. He proposes an approximate calculation method of static and

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dynamic conditions in these circuits. He also supplies standard specifications for thermistors produced by Soviet industry. The book gives examples of practical applications of thermistors in apparatus for the control and regulation of temperature in time relays and other devices. This book summarizes the results of research carried out by the author under the supervision of Professor B. S. Sotskov, Doctor of Technical Sciences, in 1949-52, and also subsequent research by B. N. Petrov, Corresponding Member of the Academy of Sciences, USSR. Chapter 13 is based on investigations carried out by M. A. Balashov in MAI (Moskovskiy Aviatsionnyy Institut) in 1955-56. He obtained characteristics of the thermistor now being used in liquid level indicators. The book also contains a description of some circuit diagrams which are now used in instruments for temperature measurements, heat protection devices, and in signaling apparatus. References 52-61 in the bibliography were published while this book was in press and therefore could not be utilized by the author. The author thanks Professor G. I. Atabekov and Docents S. P. Kolosov and S. N. Ikonnikov. There are 66 references, 60 of which are Soviet, 2 English, 2 German, 1 French and 1 Hungarian.

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Thermistors

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7-30-59

UDALOV, N.P.

PHASE I BOOK EXPLOITATION SOV/3605

Kolosov, S.P., N.P. Kolpakova, N.I. Sokolov, A.K. Ter-Akopov, N.M. Tishchenko, and N.P. Udalov

Rukovodstvo po proyektirovaniyu elementov i sistem avtomatiki; posobiye po kursovomu i diplomnomu proyektirovaniyu, vyp. 3 (Manual on Designing Automation Systems and Components; Handbook for Term and Degree Projects, No. 3) Moscow, Oborongiz, 1959. 200 p. (Series: Moscow. Aviatsionnyy institut im. Sergo Ordzhonikidze) Errata slip inserted. 12,500 copies printed.

Sponsoring Agency: R.S.F.S.R. Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya.

Ed. (Title page): B.N. Petrov, Corresponding Member, USSR Academy of Sciences, Professor; Ed. (Inside book): I.L. Yanovskiy, Engineer; Ed. of Publishing House: M.S. Antikina; Tech. Ed.: V.F. Rozhin; Managing Ed.: A.S. Zaymovskaya, Engineer.

PURPOSE: This textbook is intended for term and degree projects of students in

Manual on Designing (Cont.) SOV/3605

electromechanical divisions of schools of higher technical education. The book may also be of interest to technical personnel of industrial enterprises.

COVERAGE: This is the third issue of a series of manuals on designing automatic systems. It deals with problems of designing high-speed electromagnetic, photoelectric, contactless magnetic, and bimetallic thermal relays and push-pull voltage amplifiers. It also discusses the selection of temperature conditions for electric winding with temperature-proof synthetic insulation, and problems of designing linear regulators and studying them on models. All chapters contain necessary numerical examples. The book develops and brings to a concrete solution the basic calculations and design considerations presented in the two preceding volumes of the series and also in the book of S.P. Kolosov, "Elementy aviatsionnykh avtomaticheskikh ustroystv" (Components of Automatic Aircraft Systems). Chapter I was written by A.K. Ter-Akopov, chapter II by N.P. Udalov, chapter III by N.M. Tishchenko, chapters IV, V, and VI by S.P. Kolosov, chapter VII by N.I. Sokolov, and chapter VIII by N.P. Kolpakova. The authors thank Docents V.N. Istratov and V.I. Nefedova, Candidates of Technical Sciences, and Senior Teacher N.B. Sudzilovskiy, and others. References accompany some chapters.

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Udalov, N.P.

9(4) PHASE I BOOK EXPLOITATION SOV/2773

Poluprovodnikovyye termosoprotivleniya; sbornik statey (Thermistors; Collection of Articles) Moscow, Gosenergoizdat, 1959. 229 p. 15,000 copies printed.

Ed. (Title page): B. S. Sotskov, Doctor of Technical Sciences, Professor; Ed. (Inside book): V. A. Petrov; Tech. Ed.: G. I. Matveyev; Editorial Board: B. S. Sotskov, Doctor of Technical Sciences, Professor (Chief Ed.), N. P. Udalov, Candidate of Technical Sciences, B. S. Zaytsev, Engineer, Ye. N. Shugorev, Engineer, and V. I. Turkulets, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical personnel of plants, OKB, NII and also instructors and students of vuzes.

COVERAGE: The book contains articles dealing with problems of manufacture of thermistors and determining thermistor parameters and characteristics. The authors also discuss problems of industrial application of thermistors as control elements. The book is an effort of cooperation by scientists of a number of vuzes, members of NII and engineers of one of the plants (name is not given) of Mosgorsovnarkhoz. No personalities are mentioned. References appear at the end of some articles.

SOKOLOV, N.I.

UDALOV, N.P.

28(1) PHASE I BOOK EXPLOITATION SOV/2309

Ageykin, Dmitriy Ivanovich, Mikhail Aleksandrovich Balashov, Sergey Petrovich Kolosov, Valentina Ivanovna Nefedova, Yevgeniy Mikhaylovich Reshetnikov, Nikolay Ivanovich Sokolov, Vasiliy Mikhaylovich Stromilov, Nikolay Mikhaylovich Tishchenko, and Nikolay Petrovich Udalov

Rukovodstvo po proyektirovaniyu elementov i sistem avtomatiki; posobiye po kursovomu proyektirovaniyu (Handbook on the Design of Automatic Control Elements and Systems; Textbook for Term Projects in Design) No. 2. Moscow, Oborongiz, 1959. 247 p. (Series: Moscow. Aviatsionnyy institut im. Sergo Ordzhonikidze) Errata slip inserted. 17,500 copies printed.

Ed. (Title page): B.N. Petrov, Corresponding Member, USSR Academy of Sciences, Professor; Ed. (Inside book): V.N. Istratov, Candidate of Technical Sciences; Ed. of Publishing House: E.A. Shekhtman; Tech. Ed.: V.P. Rozhin; Managing Ed.: A.S. Zaymovskaya.

PURPOSE: This is a textbook for students of the electromechanical departments of vtuzes working on term- and diploma design projects.

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Some chapters may also be useful to engineering personnel working with automatic control systems.

COVERAGE: The authors discuss basic problems in the design of automatic-control system elements, such as transducers, relays, clutches, and power transformers. They also describe servo systems, particularly autopilots, and present numerical examples of calculating system parameters. Typical assignments for students working on term design projects are also presented. The book was written by part of the teaching staff of Moscow Aviation Institute imeni Sergo Ordzhonikidze, under the direction of Professor B.N. Petrov, Corresponding Member, USSR Academy of Sciences. Chapter I was written by D.I. Ageykin; Chapter II, by S.P. Kolosov and M. A. Balashov; Chapter III, by V.I. Nefedov; Chapter IV, by Ye. M. Reshetnikov; Chapter V, by N.P. Udalov; Chapter VI, by N.M. Tishchenko; Chapter VII, by N. I. Sokolov; and Chapter VIII, by V.M. Stromilov. The authors thank Docents V.N. Istratov, S.P. Inozemtsev and A.F. Khokhlov, Candidates of Technical Sciences, for reviewing the book. There are 69 references, all Soviet (including 2 translations).

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AVAILABLE: Library of Congress

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JP/bg
9-30-59

8 (2)

AUTHORS: Tishchenko, N. M., Candidate of Technical Sciences, Udalov, N. P., Candidate of Technical Sciences SOV/119-59-5-8/22

TITLE: A Time Relay With Semiconductor Thermoresistor for Indirect Heating (Rele vremeni s poluprovodnikovym termosoprotivleniyem kosvennogo podogreva)

PERIODICAL: Priborostroyeniye, 1959, Nr 5, pp 14 - 16 (USSR)

ABSTRACT: At first, the authors report very briefly on the shortcomings of the time relays used up to date. In fact, they needed a long "recovery" time after every use. The time relay described in the present paper is free from these shortcomings, and is also interesting because the heating and the cooling of the thermoresistor are used in this device. A thermoresistor for indirect heating is used here. The delay time is composed of the heating time of the semiconductor thermoresistor and of the cooling time after the cut-off of the current. Thus, the relay is ready for the next use immediately at the end of the delay time. The basic processes of this relay are calculated and discussed. The relay was attached to a chassis and enclosed by a metal casing. The outside dimensions of the casing are 115 • 75 • 90 mm, and its weight is 1.2 kg. There are 8 figures and 4 Soviet references.

9(2) SOV/143-59-6-21/21

AUTHOR: Udalov, N.P., Candidate of Technical Sciences

TITLE: A Review of the Book "Thermistors"

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 6, pp 133-134 (USSR)

ABSTRACT: The author reviews the book "Poluprovodnikovyye termosoprotivleniya" (thermistors) by I.F. Voloshin, A.S. Kasperovich, A.G. Shashkov, published by Izdatel'stvo AN BSSR, 1959 (Publishing House of the Belorussian AS). The author reviews briefly the development of research performed in the USSR in the field of thermistors. He mentions in this connection the work of B. T. Kolomiyets, B.S. Sotskov, G.K. Nechayev. The latter published the thesis "Principles of Applying Thermistors in Automation", the research for which was conducted at the Institut elektrotekhniki AN USSR (Institute of Electrical Engineering of the UkrSSR AS) in 1949. Research on thermistors is also performed at the Institut energetiki AN BSSR (Institute of Power Engineering of the AS BSSR). The contents of the re-

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A Review of the Book "Thermostors" SOV/143-59-6-21/21

viewed book is more or less the generalized research of the Laboratoriya elektrotekhniki AN BSSR (Laboratory of Electrical Engineering AS BSSR). The reviewer points out a number of deficiencies of this book but they do not decrease its practical value.

ASSOCIATION: Moskovskiy aviatsionnyy institut imeni S. Ordzhonikidze (Moscow Aviation Institute imeni S. Ordzhonikidze)

Card 2/2

66167

~~8(6),9(2)~~ 9,4300 SOV/143-59-8-7/22

AUTHOR: Udalov, N.P., Candidate of Technical Sciences, Docent and Zaytsev, Ye. V., Engineer

TITLE: Generator Time Relays With Thermistors

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika, 1959, Nr 8, pp 33-38 (USSR)

ABSTRACT: The authors investigated the principal possibility of building a time relay for obtaining great delays of different duration by employing a thermistor, whose time constant is more than ten times smaller than the maximum required time delay. In available literature, the recommendations for selecting the thermistor characteristic for obtaining a time delay are not always sufficiently founded. I.T. Sheftel' [Ref 1] states that thermistors, whose voltampere characteristic does not show a dropping section, but is approximately parallel to the current axis, are most suitable. Thermistors with different time constants are recommended for changing the operating time within wide

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Generator Time Relays With Thermistors

ranges. Investigations of transient processes in thermistor circuits, which are performed in the laboratory of Corresponding Member of the USSR AS, B.N. Petrov at the Moskovskiy aviatsionnyy institut (Moscow Aviation Institute) since 1949 [Ref 2,3,4] lead to the opposite conclusion. Especially, when using a thermistor with a dropping voltampere characteristic, a time delay may be obtained which may be adjusted in wide ranges, close to a magnitude exceeding by 10 times or more the magnitude of the time constant which is to be used in the thermistor circuit. Circuits with such thermistors provide an accurate fuctioning of an electromagnetic relay, if the operating current is within the area of relay effect development. The analysis of different time relay circuits lead to the conclusion that the best results could be obtained using a circuit arrangement in which the working body of the thermistor is periodically cooled and heated, which was designated by the

Generator Time Relays With Thermistors SOV/143-59-8-7/22

authors as a "generator time relay" (generatornoye rele vremeni). For reducing the influence of temperature variations of the surrounding air, a temperature stabilization circuit was employed for stabilizing the temperature of the working body. The calculation of such a circuit was explained by N.P. Udalov in a paper [Ref 5]. The authors present a simplified diagram of these relay circuits in Figure 1, while the complete circuit diagram is shown in Figure 3. An experimental model of such a relay was built and is shown by a photograph in Figure 4. The authors describe the construction of this model briefly. The time relay was calculated according to the method explained in [Ref 4]. The authors arrive at the following conclusions: 1. Time delays of great duration may be obtained by thermistors having a small time constant (which is more than ten times smaller than the duration of the time delay), if the generator time delay circuit is used. 2. Using a TOC-M thermistor, a temperature stabilization circuit for the working body of the thermistor may be built, which is

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Generator Time Relays With Thermistors SOV/143-59-8-7/22

included in the pulse generator producing an accuracy of ± 1.5% with temperature changes of the outside air from +15° to +40°. 3. The industrial production of heated thermistors equipped with temperature stabilization circuits for the working body, suitable for time delay circuits, could be started. 4. The accuracy of the time delay obtained from the generator time relay depends essentially on the feed voltage stabilization. The time delay rises with positive or negative deviations of the rated value. There are 1 photograph, 2 circuit diagrams, 3 graphs and 5 Soviet references.

ASSOCIATION: Moskovskiy ordena Lenina aviatsionnyy institut imeni S. Ordzhonikidze (Moscow - Lenin Order - Aviation Institute imeni S. Ordzhonikidze)

SUBMITTED: April 30, 1959

Remarks Concerning the Paper by A.G. Shashkov and A. S. Kasperovich, "Determination of the Specific Heat Capacity of a Thermistor"

S/170/60/003/008/019/019/XX
B019/B067

graphically determined. U_k' is the instantaneous voltage drop on the thermistor, I_k' the instantaneous amperage in the thermistor, U_k and I_k the voltage drop and the amperage of the thermistor under steady conditions. The differential equation of the transient reads as follows: $dT/dt = (U_k'I_k' - U_kI_k)cU$ (1). The calculation of the heat capacity of a thermistor is discussed by means of the volt-ampere characteristics shown in Fig.1a and the curves for a transient shown in Fig.1b. There are 1 figure and 2 Soviet references.

ASSOCIATION: Aviationnyy institut im. S. Ordzhonikidze, g. Moskva
(Institute of Aviation imeni S. Ordzhonikidze, Moscow)

SUBMITTED: February 23, 1959

S/170/60/003/008/019/019/XX
B019/B067

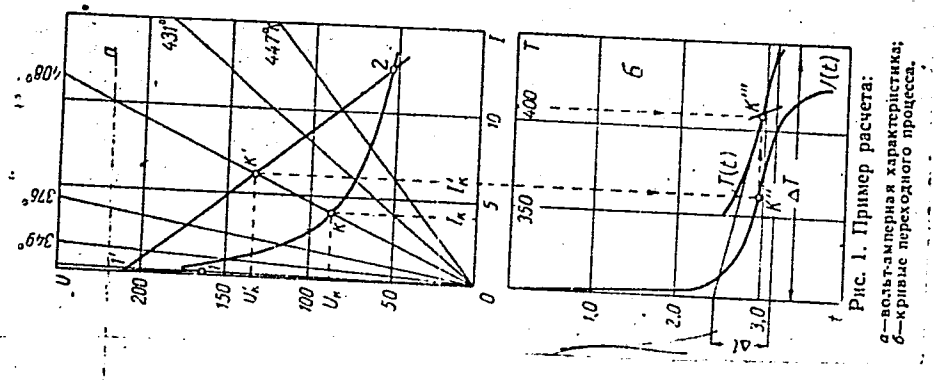

Рис. 1. Пример расчета:
а—вольт-амперная характеристика;
б—кривые переходного процесса.

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82944
S/103/60/021/009/012/013
B012/B063

16.9500

AUTHOR: Udalov, N. P. (Moscow)

TITLE: Calculation of Transients in a Circuit With a Thermistor by Way of Approximation

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol. 21, No. 9, pp. 1323-1325

TEXT: The paper of Ref. 1 described a graphic-analytical method of calculating transients in a circuit with a thermistor in the case in which the characteristic parameters of the mode of operation of the circuit change abruptly. This method was further developed in the papers of Refs. 2 and 3. Its greatest disadvantage was eliminated by means of the procedure suggested in the paper of Ref. 4. Nevertheless, the solution of the problem was rather complicated. Here, the author suggests another form of a differential equation, formula (2), which makes it possible to reduce calculation considerably. It is used to determine the heating of the thermistor by the current passing through it. Moreover, it allows to take the variables necessary for the calculation of the transient

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Calculation of Transients in a Circuit With a Thermistor by Way of Approximation

S/103/60/021/009/012/013
B012/B063

directly from the diagram of the static characteristics (Fig. 1). The calculation is illustrated by an example. There are 1 figure and 6 Soviet references.

SUBMITTED: February 15, 1960

Card 2/2

NECHAYEV, Georgiy Kuz'mich; UDALOV, Nikolay Petrovich; INOZEMTSEV, S.P., red.; BORUNOV, N.I., tekhn. red.

[Relays and transducers using semiconductor thermistors] Rele i datchiki s poluprovodnikovymi termosoprotivleniiami. Moskva, Gos. energ. izd-vo, 1961. 108 p. (Biblioteka po avtomatike, no.29) (MIRA 14:7)

(Transducers) (Electric relays)

BALASHOV, M.A.; VORONKOV, B.S.; YELAGIN, Ye.B.; KISELEV, L.N.; KOLOSOV, S.P.; LEONT'YEVA, V.P.; NEFEDOVA, V.I.; STROMILOV, V.M.; SOKOLOV, N.I.; TISHCHENKO, N.M.; UDALOV, N.P.; PETROV, B.N., akademik, red.; GRIGORASH, K.I., red. izd-va; ROZHIN, V.P., tekhn. red.

[Handbook on the design of components and systems of automatic control; a manual for the preparation of course and diploma projects] Rukovodstvo po proektirovaniiu elementov i sistem avtomatiki; posobie po kursovomu i diplomnomu proektirovaniiu [By] M.A.Balashov i dr. Pod red. B.N.Petrova. Moskva, Gos. nauchno-tekhn. izd-vo Oborongiz. No.4. 1961. 311 p. (MIRA 15:3)

1. Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze. (Automatic control) (Electronics)

SVERDLOV, M. M.; UDALOV, N. P.

Thermistors. Priborostroenie no.11:28-30 N '61. (MIRA 14:10)
(Thermistors)

KOLOSOV, S.P., kand.tekhn.nauk, dotsent; UDALOV, N.P., kand.tekhn.nauk, dotsent

Review of G.I. Atabekov's book "Theory of linear electrical networks." Izv. vys. ucheb. zav.; elektromekh. 4 no. 1:145-146 '61. (MIRA 14:4)

1. Moskovskiy aviatsionnyy institut.
(Electric networks) (Atabekov, G.I.)

27389
S/143/61/000/003/001/005
D201/D30[illegible]

26.2351
9,2540 (1020, 1138, 1159)

AUTHORS: D'yakov, O.P., Engineer, Udalov, N.K., Candidate of Technical Sciences, Docent, Tishchenko, N.M., Candidate of Technical Sciences

TITLE: A contactless impulse generator

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Energetika, no. 3, 1961, 41 - 44

TEXT: The article gives suggestions for the design and shows the experimental results of an investigation of the contactless pulse generator (CPG). The circuit diagram (Fig. 1) includes a heated element PTS, whose working body is connected in the control circuit, and the heat is connected in the winding of the contactless magnetic relay BMR. At zero control current, the current flowing through the heater is a maximum (Fig. 1b) and the working body of the semi-conductor thermoresistance PTS is heated to a temperature of $\theta_0 + \theta_\Pi$ where θ_0 = ambient temperature, and θ_Π = the temperatu-

Card 1/5

A contactless impulse generator

re rise of the PTS, corresponding to the maximum current flowing through the heater. The control current is

$$I_1' = \frac{U}{R_{(\theta_0 + \theta_\Pi)} + r_y + r_1},$$

where U - the voltage, $R_{(\theta_0+\theta_\Pi)}$ - the value of the resistance of the semi-conductor thermoresistance PTS, r_y - the resistance of the control winding, r_1 - additional resistance. The working cycle of the PTS is as follows: when the current is flowing through the PTS its resistance decreases, the current I_y increases and at I_y = $= I_{cp}$ (point 2 in Fig. 1b), the current is sharply reduced to a very small value, and the PTS starts cooling down. Its resistance increases and the control current I_y is reduced to the value $I_{отп}$ (point 3 in Fig. 1b). At $I_y = I_{отп}$ the current is suddenly increa-

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A contactless impulse generator

sed to a maximum value and the PTS is warmed up. These changes have a cyclic character. The calculation of the length of the pulses is reduced to calculating the dynamics of the control circuit, BMR. The calculation of a BMK with heated PTS does not differ from that of an ordinary PTS. For calculations the following initial conditions are required. 1) The volts-amps characteristics of the PTS at θ_o and at $\theta_o + \theta_n$; 2) The heating curve of the PTS; 3) The time constant of the PTS. Tests were carried out with an experimental pulse generator, whose circuit was connected as in Fig. 1. The contactless magnetic relay BMR was built as a thoroid of the band permalloy. The PTS-the semi-conductor thermo resistance of the type MMT-4 was used with a resistance of 100 K ohm at 20°C. Its temperature characteristic was given by $R = 3.3e\ 3010/T$. The resistance of the heater was 1000 ohms. The time constant of the heated PTS was $\tau = 66$ secs. The supply of energy was 40 volts, 1000 cycles per sec. As the period of oscillations depends strongly on the bias of the current stabilizing device was introduced with a silicon stabilizer A 808 (D808). This assured $U_{outlet} = 7.3$ volts at a coeffi-

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cient of stability 60. The maximum heating current was 25 m amps, which corresponded to a temperature rise of $\theta_n = 40^oC$. At the selected values of the parameters, the generator works at a variation of voltage from 60 to 100 volts. The dependence of t_2, t_3 and $T = t_2 + t_3$ from the supply voltage is shown. At tests at normal ambient temperatures the generator showed good stability: at U = 80 V I_{CM} = - 26 ma (the bias current) and $\theta_o = 20^oC$, the maximum deviation from T_{cp} = 90 sec. did not exceed 2 sec. i.e. about 2 %. There are 3 figures and 4 Soviet-bloc references.

ASSOCIATION: Moskovskiy ordena Lenina aviatsionnyy institut imeni S. Ordzhonikidze (Moscow Order of Lenin Aeronautical Institute imeni S. Ordzhonikidze)

SUBMITTED: April 25, 1960

UDALOV, N.P.

Approximate determination of the temperature of a nonlinear resistor of the type thermistor - varistor. Inzh.-fiz.zhur. 4 no.11:132-134 N '61. (MIRA 14:10)

1. Aviatsionnyy institut im. Ordzhonikidze, g. Moskva.
(Thermistors)

UDALOV, N.P. (Moskva)

Design of a two-terminal network with one semiconductor thermistor in linear operation. Avtom. i telem. 22 no.3:409-412 Mr '61. (MIRA 14:9)

(Temperature regulators)

D'YAKOV, O.P. (Moskva); TISCHENKO, N.M. (Moskva); UDALOV, N.P. (Moskva)

Time relay using a thermisor and a magnetic relay. Avtom. i telem. 22 no.5:648-653 My '61. (MIRA 14:6)
(Electric relays) (Delay networks)

TURKULETS, Vladimir Illarionovich; UDALOV, Nikolay Petrovich; TISHCHENKO, N.M., red.; FRIDKIN, L.M., tekhn. red.

[Photodiodes and phototriodes]Fotodiody i fototriody. Moskva, Gosenergoizdat, 1962. 62 p. (Biblioteka po avtomatike, no.64) (MIRA 16:1)
(Photoelectric cells) (Electron tubes)

SHASHKOV, Anatoliy Gerasimovich; KASPEROVICH, Alla Stanislavovna; UDALOV, N.P., red.; BORUNOV, N.I., tekhn.red.

[Dynamic characteristics of thermistor circuits] Dinamicheskie svoistva tsepei s termistorami. Moskva, Gosenergoizdat, 208 p. (MIRA 15:5)
(Electric networks) (Thermistors)

NECHAYEV, Georgiy Kuz'mich, kand. tekhn. nauk; UDALOV, N.P., kand. tekhn. nauk, dots., retsenzent; NEMCHUNOVA, O.A., red.izd-va; SHAFETA, S.M., tekhn. red.

[Semiconductor thermistors in automatic control] Poluprovodnikovye termosoprotivleniia v avtomatike. Kiev, Gostekhizdat, USSR, 1962. 253 p. (MIRA 15:12)

1. Moskovskiy aviatsionnyy institut imeni S.Ordzhonikidze (for Udalov).

(Thermistors) (Automatic control)

TISHCHENKO, Nikolay Mikhaylovich; UDALOV, N.P., red.; BUL'DYAYEV, N.A., tekhn. red.

[Magnetic amplifiers with increased stability] Magnitnye usiliteli povyshennoi stabil'nosti. Moskva, Gosenergoizdat, 1963. 112 p.(Biblioteka po avtomatike, no.73) (MIRA 16:7)
(Magnetic amplifiers)

ROTBERT, I.L.; UDALOV, N.P.

Semiconductor diode and transistor temperature pickups. Pri-
borostroenie no.10:1-3 O '63. (MIRA 16:11)

UDALOV, N.P., kand.tekhn.nauk, dotsent

Approximate calculation of the output characteristics of a transistor. Izv. vys. ucheb. zav.; energ. 6 no.10:119-122 O '63. (MIRA 16:12)

1. Moskovskiy ordena Lenina aviatsionnyy institut imeni S. Ordzhonikidze.

L 9886-63 BDS
ACCESSION NR: AP3000472 S/0103/63/024/005/0696/0698

AUTHOR: Robert, I. L.; Udalov, N. P. (Kazan', Moscow) 48

TITLE: Semiconductor diode as a primary detector of temperature 10

SOURCE: Avtomatika i telemekhnika, v. 24, no. 5, 1963, 696-698

TOPIC TAGS: temperature detector, semiconductor-diode temperature detector

ABSTRACT: A pronounced effect of temperature on the diode reverse current and the diode's "saturated" current-voltage characteristic permit using the reverse-connected semiconductor diode as a sensitive, low-consumption temperature detector. Eight types of Soviet diodes, 50 of each type, were tested as detectors. Resistance spread and thermal time constant are reported for these germanium junction types: D7-B, D7-G, D7-E, D7-Zh, D-302, D-303, D-304, and D-305. Characteristics of a D-7-G detector are given for +10 to +40C range. The diode detector are recommended for measuring posi ive emperat res up to 70C. Orig. art. has: 4 equations, 3 figures, and 1 table.

Card 1/2/

ACCESSION NR: AP4024688 S/0103/64/025/002/0272/0274

AUTHOR: Udalov, N. P. (Moscow)

TITLE: Thermal relay with a transistor detector

SOURCE: Avtomatika i telemekhanika, v. 25, no. 2, 1964, 272-274

TOPIC TAGS: relay, thermal relay, transistorized thermal relay, P-13A transistor, transistor heat sensor

ABSTRACT: A schematic diagram and design method for a thermal relay with a transistor operating as a sensing element are described. The relay is connected in the collector circuit; two resistors in series are inserted in the base circuit, one of the resistors being shunted by a normally closed contact of the relay. Simple formulas for the base currents that cause relay operation and release are offered. An experimental model included a P-13A transistor, an electromagnetic relay with 8 ma operating and 3 ma release currents, and a

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ACCESSION NR: AP4024688

1,500-ohm winding. By adjusting the base current within 30-500 microamp, the relay could be set for any temperature from -40 to +70C. The dc supply voltage was 27 v. Orig. art. has: 4 figures and 15 formulas.

ASSOCIATION: none

SUBMITTED: 21Nov62 DATE ACQ: 15Apr64 ENCL: 00

SUB CODE: GE, IE NO REF SOV: 003 OTHER: 000

Card 2/2

UDALOV, N.P., kand. tekhn. nauk

Calculation of networks with nonlinear thermistor and varistor type resistances. Trudy MAI no.155:110-119 '64. (MIRA 17:11)

ACC NR: AM6003232 Monograph UR/

Udalov, Nikolay Petrovich

Semiconductor transmitters (Poluprovodnikovyye datchiki) Moscow, Izd-vo "Energiya", 65. 0238 p. illus., biblio. 22,000 copies printed.

TOPIC TAGS: nonlinear automatic control system, thermistor, semiconductor diode, photodiode, transistor, temperature dependence, variable resistor

PURPOSE AND COVERAGE: This book presents the principles for designing and planning automation elements with temperature-dependent semiconductor nonlinear resistors. Also viewed are necessary parameters and temperature characteristics of thermoresistors, diodes, photodiodes, transistors, phototransistors and varistors. The book gives the procedure for approximate design of static and dynamic regimes of electric circuits with these instruments. The minimum of parameters necessary for determining the nature of their properties is established, and the procedure for sorting semiconductor devices into groups with identical characteristics is considered. Possible uses are shown of temperature dependence of the parameters of different semiconductor devices for the construction of temperature transmitters. This book is recommended for a wide group of technical engineers in automation of production processes as well as for students in corresponding specialties.

TABLE OF CONTENTS (abridged):

Card 1/2 UDC:621.382

ACC NR: AM6003232

SUB CODE: 09 SUBM DATE: 05Aug65/ ORIG REF: 098/ OTH REF: 003

Card 2/2

ROTBERT, I.L., kand. tekhn. nauk; UDALOV, N.P., doktor tekhn. nauk

Two-diode temperature pickup. Priborostroenie no.12:13-14 D '65.
(MIRA 19:1)

L 17543-66 EWT(1)/EWA(h)
ACC NR: AP6001190 (A) SOURCE CODE: UR/0119/65/000/012/0012/0014

AUTHOR: Rotbert, I. L. (Candidate of technical sciences); Udalov, N. P. (Doctor of technical sciences)

ORG: none

TITLE: Two-diode temperature sensor

SOURCE: Priborostroyeniye, no. 12, 1965, 12-14

TOPIC TAGS: temperature sensor, semiconductor temperature sensor

ABSTRACT: To avoid the difficulties connected with d-c amplification, a circuit of two series-connected (in opposition) semiconductor diodes is suggested for measuring temperature. Such a circuit retains all the advantages of the semiconductor temperature sensor and can be supplied with ac, thus ensuring easy amplification conditions. Operation of the circuit under idealized conditions is analyzed. However, parameter spread in commercial semiconductor diodes makes their use in the temperature sensor doubtful. Hence, a special 2-diode design has been developed and tested within 10—45C; load resistance, 2200 ohms; supply voltage, 40 v; test data has shown good agreement with theoretical formulas. Orig. art. has: 9 figures and 6 formulas.

SUB CODE: 09, 13 / SUBM DATE: none / ORIG REF: 003

UDC: 621.3.083.8:536.5

Card 1/1

ARTEM'YEV, M.V.; UDALOV, P.I.

High-speed thyratron protection of the plate circuits of radio transmitters. Vest. sviazi 21 no.6:7-9 Je '61. (MIRA 14:9)

1. Nachal'nik smeny radiotsentra Moskovskoy direktsii radiosvyazi i radioveshchaniya (for Artem'yev. 2. Inzhener generatornogo zala Moskovskoy direktsii radiosvyazi i radioveshchaniya (for Udalov).

(Radio—Transmitters and transmission)

UDALOV, P. M.

USSR/Academy of Sciences - Commissions May 51
Engineering - Heat Pumps, Central Heating

"Expanded Conference of the Commission for Coordinating the Reconstruction of Moscow," P. M. Udalov, Cand Econ Sci

"Vest Ak Nauk SSSR" No 5, pp 96-99

Brief summaries of work done by various institutes of the Acad Sci USSR toward the reconstruction of Moscow, e.g., the Inst of Phys Chem is working on the physicochemical bases for the production and use of various building materials, ENIN (Power Eng Inst), Acad Sci USSR, is working on a

221T99

comprehensive power system for Moscow, etc. V. I. Veyts reported on the work of the ENIN in the construction of central heat and power stations outside cities and in the application of the ENIN's heat pump for heating the public and residential buildings of Moscow in winter and cooling them in summer.

221T99

UDALOV, S.K.

Study on the properties of new hemostatic preparations from neutralized oxycellulose; experimental studies. Khirurgiia 35 no.2:115-117 F '59. (MIRA 12:5)

1. Iz Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.

(HEMOSTATICS,
oxycellulose exper. research (Rus))

UDALOV, S.K. (First Lt. of the Medical Service)

"The use of a gauze made of neutralized oxycellulose in outpatient and clinical practice."

Voyenno-Meditsinskiy Zhurnal., No 8, Aug 1961

UDALOV, S.K., starshiy leytenant meditsinskoy sluzhby

Use of gauze from neutralized oxycellulose in dispensary and clinical practice. Voen.-med. zhur. no.8:81-82 Ag '61. (MIRA 15:2)
(OXYCELLULOSE--THERAPEUTIC USE)
(BANDAGES AND BANDAGING)

UDALOV, S.K.

Case of poisoning with a tincture from the roots of ginseng. Mat. k izuch. zhen'. i drug. lek. rast. Dal'. Vost. no.5: 167-169 '63. (MIRA 17:8)

1. Ob"yedinennaya bol'nitsa imeni Kuybysheva, Leningrad.

UDALOV, S.K.

Apparatus for nitrous oxide and ether anesthesia with automatic respiration, made from parts of the RN-59 and UNA-1 apparatuses. Eksper. khir. i anest. 9 no.6:85-88 N-D '64. (MIRA 18:7)

1. Leningradskiy nauchno-issledovatel'skiy institut khirurgicheskogo tuberkuleza (direktor - prof. D.K.Khokhlov, nauchnyy rukovoditel' deystvitel'nyy chlen AMN SSSR prof. P.G.Kornev).

UDALOV, V.

Decentralized payments by means of settling mutual claims. Den. i kred. 12 no.2:8-12 Ag'54. (MLRA 8:2)
(Payment)

LAPARDIN, V., nauchnyy sotrudnik; UDALOV, V., nauchnyy sotrudnik

Thermophysical testing of exterior walls of large-panel apartment houses. Zhil. stroi. no.10:31-32 '62. (MIRA 16:1)

1. Donetskiy nauchno-issledovatel'skiy institut nedshakhtnogo stroitel'stva.

(Walls—Testing)

UDALOV, V., shturman dal'nego plavaniya, inzhener-sudovoditel'.

Some peculiarities of observations of the sun's altitude in low latitudes.
Mor.i rech.flot 13 no.6:16-17 O '53. (MLRA 6:10)
(Nautical astronomy)

UDALOV, V., kandidat tekhnicheskikh nauk, shturman dal'nego plavaniya.

Determining a ship's position according to altitude observations of near-equatorial stars. Mor. i rech.flot 14 no.10:9-12 O '54.
(Nautical astronomy) (MLRA 7:11)

UDALOV, V., kandidat tekhnicheskikh nauk

Determining the position of a vessel by altitudes equalling declinations of heavenly bodies. Mor.flot 15 no.5:13-14
(Nautical astronomy) (MLRA 8:6)

UDALOV, V., kand.tekhn. nauk, kapitan dal'nego plavnaiya

Tabular method of determining movements of an oncoming ship while navigating with radar. Mor. flot 18 no.9:4-5 S '58. (MIRA 11:10)

1.Vysshaye voyenno-inzhenernoye morskoye uchilishche.
(Navigation--Tables) (Radar in navigation)

UDALOV, V., dotsent, kand. tekhn. nauk

Determining compass corrections by the visible sunrise and sunset. Mor. flot. 25 no. 12:21-22 D '65. (MIRA 18:12)

UDALOV, V. A.

32555. Povysi' proizvoditel'nost' lebedok na trelevke, les. prom-st', 19[illegible], No. 9, 17-18

SO: Letopis' Zhurnal'nykh Statey, Vol. 44, Moskva, 1949

UDALOV, V.A., inzhener.

Sorting, stacking and loading tree-length logs with lightweight cable cranes. Mekh.trud.rab.10 no.7:12-13 Jl '56. (MIRA 9:9)
(Lumbering--Machinery)

TEKUCHEV, A.N.; FROLIN, M.I.; UDALOV, V.F.; GRYAZNOV, A.L.; BOBROV, B.S.

Automatic dévice for testing permanent magnets by residual induction and coercive force. Izm.tekh. no.4:37-39 Ap '63. (MIRA 16:5)

(Magnets—Testing)

BOBROV, B.S. (Ryazan'); GRYAZNOV, A.L. (Ryazan'); GRYAKALOV, V.A. (Ryazan'); SAL'NIKOV, V.Ya. (Ryazan'); UDALOV, V.F. (Ryazan'); FROLIN, M.I. (Ryazan'); SHKHALAKHOV, Yu.Sh. (Ryazan')

System for the automatic control of distributed objects using operating lines of automatic telephone exchanges as communication channels. Avtom. i telem. 24 no.11:1593-1596 N '63.
(MIRA 16:12)

L 7751-66 EWT(1)/EPA(a)-2/EWT(m)/EWP(i)/EWP(t)/EWP(b) IJP(c) JD/GG

ACC NR: AP5025896 SOURCE CODE: UR/0057/65/035/010/1834/1839

AUTHOR: Udalov, V.F. 44,55

ORG: Ryazan' Radiotechnical Institute (Ryazanskiy radiotekhnicheskiy institut) 44,55

TITLE: Investigation of the states of uniaxial ferromagnetic films on the basis of the rotation model

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 10, 1965, 1834-1839

TOPIC TAGS: magnetization, ferromagnetic film, magnetic energy, rotation 21, 44, 55

ABSTRACT: The equation given by C.A.Neugebauer (Proc. conf. on magnetism a. Magnet. Mater., 4, No. 4, 358, No. 4, 1959) for the magnetic energy of a thin ferromagnetic film when the magnetizing field and the magnetization do not lie in the plane of the film but the component of the field in the plane of the film is in the easy direction is generalized to the case when the component of the magnetizing field in the plane of the film is not in the easy direction. Experiments by the author (Izmeritel'naya tekhnika, 8, 1965) have shown that the magnetization first rotates within the plane of the film until it is parallel to the component in the plane of the film of the magnetizing field and subsequently rotates out of the plane of the film. The energy equation derived on the basis of this behavior with the aid of the rotation model is employed to derive the locus of the critical points which separate stable from un-

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ACC NR: AP5025896

stable states of the magnetization vector. The derived equations provide a basis for the theoretical investigation of magnetization switching in uniaxial films for arbitrary directions of the external magnetic field. These equations are more general than those of V.V.Kobelev (Magnitnyye elementy ustroystva vychislitel'noy tekhniki Sb. statey Instituta tochnoy mekhaniki i vychislitel'noy tekhniki AN SSSR, str. 56-84, M. 19 1961). Orig. art. has: 29 formulas and 3 figures.

SUB CODE: SS, EM/ SUBM DATE: 08Jan65/ ORIG REF: 003/ OTH REF: 001

Card 2/2

L 34362-66 EWT(m)/EWP(t)/ETI IJP(c) JD

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TITLE: Contactless measurement of conductivity in thin films

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ABSTRACT: An inductive method of measuring conductivity σ of thin films is proposed which has several advantages over the various contact methods usually employed to find σ. The general technique is to deposit an annular ring of the film in question on a dielectric substrate, such that ring dimensions and cross-sectional area are known. The sample is suspended in bearings in a rotatable frame. Application of a sinusoidal magnetic field in the plane of the ring induces a ring current; applying a second field phase-shifted from the first causes torquing of the ring. A restoring torque is applied whose known current is a function of the unknown induced current in the ring; hence the latter may be found, and conductivity of the sample is readily calculated. In the case of a ferromagnetic film, the additional effect of film magnetization moment has to be taken into account. The author used this contactless

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